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(54) Title: MEIOTIC RECOMBINATION IN VIVO OF PARTIALLY HOMOLOGOUS DNA SEQUENCES

(57) Abstract

Process for the meiotic recombination *in vivo* of partially homologous DNA sequences having up to 30 % of base mismatches, wherein eukaryotic cells containing the sequences and in which an enzymatic mismatch repair system is defective, are maintained under conditions to effect meiosis. Preferably the enzymatic mismatch repair systems of the eukaryotic cells are defective by virtue of at least one *mutS* protein and/or at least one *mutL* protein being defective or missing. The eukaryotic cells may be unicellular organisms such as yeasts.